

REMARKS

The Office Action dated May 16, 2006 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 3, 4, 6, 9, 12, and 13 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claim 2 has been cancelled without prejudice or disclaimer. No new matter has been added and no new issues are raised which require further consideration or search. Claims 1 and 3-13 are currently pending in the application and are respectfully submitted for consideration.

The Office Action rejected claims 1, 2, 8, and 10-12 under 35 U.S.C. 102(b) as being anticipated by Japanese Publication No. 10-000626 (JP '626). This rejection is respectfully traversed.

Claim 1, upon which claims 8, 10, and 11 are dependent, recites a disc-molding mold including a first support member, a first disc-shaped member attached to the first support member, a second support member, and a second disc-shaped member attached to the second support member. The second disc-shaped member faces the first disc-shaped member and forms a cavity space in cooperation with the first disc-shaped member when the disc-molding mold is clamped. A medium flow passage for temperature control is formed in each of the first and second disc-shaped members, and a stamper is removably attached to one of the first and second disc-shaped members. In the vicinity of outer peripheral edges of the first and second disc-shaped members, a heat

insulating section is formed in the stamper-side disc-shaped member, on a predetermined location on the radially outer side of the medium flow passage, and thereon the cooling capacity of the medium flow passage of the stamper-side disc-shaped member is lower than the cooling capacity of the medium flow passage of the non-stamper-side disc-shaped member.

Claim 12 recites a stamper-side disc-shaped member for disk-molding mold including a first support member, a first disc-shaped member attached to the first support member, a second support member, and a second disc-shaped member attached to the second support member. The second disc-shaped member faces the first disc-shaped member and forms a cavity space in cooperation with the first disc-shaped member when the disc-molding mold is clamped. A medium flow passage for temperature control is formed in each of the first and second disc-shaped members, and a stamper is removably attached to one of the first and second disc-shaped members. A heat insulating section is formed in the stamper-side disc-shaped member on the outer side of the medium flow passage so that in the vicinity of outer peripheral edges of the stamper-side disc-shaped member, the cooling capacity of the medium flow passage of the stamper-side disc-shaped member is lower than the cooling capacity of the medium flow passage of the non-stamper-side disc-shaped member.

Thus, an advantage of the present invention is to prevent over-cooling of resin in the vicinity of the outer peripheral edge of the mirror-surface disc. As will be discussed

below, however, the cited prior art fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the advantages and features discussed above.

JP '626 discloses to a method and apparatus for molding plastic. More specifically, JP '626 is directed to making a substrate wherein both the inner and outer peripheral parts have a uniform transfer property that is obtained by using an insulator, the effect of which changes according to the position in a cavity. A ceramic insulating material 13 is used and its thickness is increased with increasing distance from the gate.

Applicants respectfully submit that JP '626 fails to disclose or suggest all of the elements of the current claims. For example, JP '626 does not disclose or suggest "in the vicinity of outer peripheral edges of the first and second disc-shaped members, a heat insulating section is formed in the stamper-side disc-shaped member, on a predetermined location on the radially outer side of the medium flow passage," as recited in claim 1. Similarly, JP '626 does not disclose or suggest "a heat insulating section is formed in the stamper-side disc-shaped member on the outer side of the medium flow passage so that in the vicinity of outer peripheral edges of the stamper-side disc-shaped member, the cooling capacity of the medium flow passage of the stamper-side disc-shaped member is lower than the cooling capacity of the medium flow passage of the non-stamper-side disc-shaped member," as recited in claim 12.

According to embodiments of the present invention, in order to prevent over-cooling of resin in the vicinity of the outer peripheral edge of the stamper-side mirror surface disc 16, a heat insulating section (a closed chamber 63) is formed on a

predetermined location on the radially outer side of a first medium flow passage 61 along a line corresponding to the outer peripheral edge of the stamper. As a result, the heat insulating section prevents transmission of heat from the radially inner side of the heat insulating section to the radially outer side thereof (Specification, page 20, line 23 – page 21, line 21).

According to JP '626, as discussed above, an insulating material 13 is located on the stamper side disc-shaped member and decreases in thickness from the outer edge of the disc-shaped member to the inner portion of the disc-shaped member (JP '626, Figure 2). JP '626 does not disclose, however, that the insulating material 13 is formed on a predetermined location on the radially outer side of a first medium flow passage. Therefore, JP '626 fails to disclose or suggest "in the vicinity of outer peripheral edges of the first and second disc-shaped members, a heat insulating section is formed in the stamper-side disc-shaped member, on a predetermined location on the radially outer side of the medium flow passage," as recited in claim 1, or that "a heat insulating section is formed in the stamper-side disc-shaped member on the outer side of the medium flow passage so that in the vicinity of outer peripheral edges of the stamper-side disc-shaped member, the cooling capacity of the medium flow passage of the stamper-side disc-shaped member is lower than the cooling capacity of the medium flow passage of the non-stamper-side disc-shaped member," as recited in claim 12.

Furthermore, the objective of JP '626 is to change a transfer efficiency to correspond to the position in the cavity when heat is transferred from the surface of the

cavity to the medium flow passage 12. In contrast, an object of the present invention is to prevent over-cooling of resin in the vicinity of the outer peripheral edge of the mirror-surface disc 16. Therefore, a person of skill in the art would not be motivated to modify JP '626 to yield the claimed invention, as the objectives of JP '626 and the present invention are completely different.

Consequently, for at least the reasons discussed above, JP '626 fails to disclose or suggest all of the elements of claims 1 and 12. As such, Applicants respectfully request that the rejection of claims 1 and 12 be withdrawn.

Claims 3-11 and 13 are dependent upon claims 1 and 12, respectively. Thus, claims 3-11 and 13 should be allowed for at least their dependence upon claims 1 and 12, and for the specific limitations recited therein.

Claim 10 was rejected under 35 U.S.C. 102(b) as being anticipated by US Patent Pub. No. 2002/0058084 to Sandstrom et al. (Sandstrom). This rejection is respectfully traversed for the following reasons.

Sandstrom is directed to an optical disk mold tooling for reduced edge wedge. Sandstrom also describes an injection molding apparatus used in the manufacture of an optical disk. The moving side of the apparatus 46 includes a thermal inhibiting mechanism which includes outer holder. The thermal inhibiting mechanism operates to inhibit heat flow from the outer edge of the disk substrate during cooling of the disk molding material. Further, Sandstrom discloses a resistive heater that is disposed in order to restrain heat transmission from the outer circumference of optical disk 20 to outer

holder 68. Additionally, Sandstrom discloses that the recirculating water coil 108 is disposed in order to restrain the heat transmission from the outer circumference of optical disk 20 to outer holder 68.

Applicants note that claim 10 is dependent upon claim 1 and, therefore, inherits all of the limitations of that claim. Sandstrom, like JP '626, fails to disclose or suggest "in the vicinity of outer peripheral edges of the first and second disc-shaped members, a heat insulating section is formed in the stamper-side disc-shaped member, on a predetermined location on the radially outer side of the medium flow passage," as recited in claim 1. Sandstrom only discloses that the resistive heater 100 and recirculating water coil 108 are disposed on the moving side 46 and not on the fixed side 44. Therefore, Sandstrom fails to disclose or suggest all of the limitations of claim 10. In any case, claim 10 should be allowed for at least its dependence upon claim 1, and for the specific limitations recited therein.

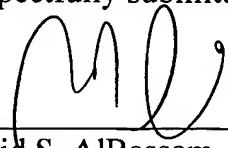
The Office Action objected to claims 3-7, 9, and 13 as being dependent upon a rejected base claim, but indicated that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As discussed above, Applicants respectfully submit that claims 1 and 12, upon which claims 3-7, 9, and 13 are dependent, recite subject matter that is neither disclosed nor suggested by the cited prior art. As such, Applicants submit that claims 3-7, 9, and 13 are allowable in their current form and therefore claims 3-7, 9, and 13 have not been amended to be in independent form.

For at least the reasons discussed above, Applicants respectfully submit that the cited prior art fails to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1 and 3-13 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Petition for Extension of Time
Request for Continued Examination